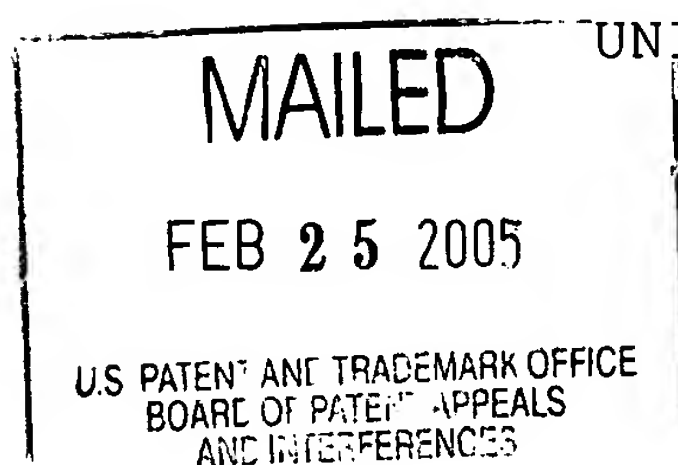


The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.



UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JAMES M. CHWALEK and DAVID L. JEANMAIRE

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Appeal No. 2005-0284  
Application No. 10/035,902

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ON BRIEF

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Before KIMLIN, OWENS and KRATZ, Administrative Patent Judges.  
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-8, all the claims pending in the present application. Claims 1 and 2 are illustrative:

1. An ink jet printer comprising:

a print head having an array of nozzles from which ink droplets of adjustable volume are emitted;

a mechanism adapted to individually adjust the volume of the emitted ink droplets, said mechanism having a first state wherein the emitted droplets of selected nozzles are of a predetermined small volume and a second state wherein the emitted droplets of selected nozzles are of a predetermined large volume; and

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a controller adapted to selectively switch the mechanism between its first and its second states such that ink droplets of said predetermined large volume are not simultaneously emitted from adjacent ones of said nozzles.

2. An ink jet printer as set forth in Claim 1, wherein the nozzle array is linear.

The examiner relies upon the following reference in the rejection of the appealed claims:

Hawkins et al. (Hawkins)	6,457,807 B1	Oct. 1, 2002
		(filed Feb. 16, 2001)

Appellants' claimed invention is directed to an inkjet printer comprising a print head having an array of nozzles which emit ink droplets. The printer also comprises a mechanism that adjusts the volume of the droplets to either a first state of small volume or a second state of large volume. In addition, the printer comprises a controller that can selectively switch the mechanism between its first and second states in order that ink droplets of a large volume are not simultaneously emitted from adjacent nozzles.

Appealed claims 1-8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Hawkins.

In accordance with the grouping of claims set forth at page 2 of appellants' Brief, claims 1 and 3-8 stand or fall together, whereas claim 2 is argued separately.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we concur with the examiner that the subject matter of claim 1 is described in Hawkins within the meaning of § 102. However, we find that the examiner's § 102 rejection of claim 2 is not well-founded.

We consider first the examiner's rejection of claim 1, with which claims 3-8 stand or fall. Contrary to appellants' argument, Hawkins describes a continuous inkjet printer having the claimed mechanism and controller that allow the nozzles to emit either small or large volume ink droplets that enable the reference printer to be capable of emitting small and large volume droplets from adjacent nozzles. In relevant part, Hawkins discloses the following:

Ink drop forming mechanism **22** . . . is selectively activated at various frequencies causing filaments of working fluid **20** to break up into a stream of selected ink drops (one of **26** and **28**) and non-selected ink drops (the other of **26** and **28**) with each ink drop **26, 28** having a volume and a mass. The volume and mass of each ink drop **26, 28** depends on the frequency of activation of ink drop forming mechanism **22** by a controller **24**.

(Column 5, lines 49-57). Significantly, appellants are not claiming a process of printing wherein ink droplets of large volume are not simultaneously emitted from adjacent ones of said nozzles, but, rather, an apparatus that is capable of performing

the recited function. Since Hawkins expressly teaches that the volume of each ink droplet can be controlled with the frequency of activation, the printer of Hawkins is capable of controlling the emission of adjacent ink droplets such that they are not both of large volume. Furthermore, we agree with the examiner's reasoning that Figures 1a and 1b of Hawkins depict diagonally adjacent nozzles that do not simultaneously emit droplets of large volume. Claim 1 on appeal does not exclude adjacent nozzles that are adjacent in the diagonal direction.

We now turn to the examiner's rejection of claim 2, which requires that "the nozzle array is linear" (emphasis added). While it cannot be gainsaid that the examiner correctly states that "[a] diagonal line is linear" (page 7 of Answer, second paragraph), claim 2 requires a linear array of nozzles, not simply nozzles aligned in a line. Moreover, the Hawkins reference cited by the examiner provides evidence that one of ordinary skill in the art would not interpret the nozzles of Hawkins as being part of a linear array. Hawkins discloses that "[r]egardless of the type of inkjet printer technology, it is desirable in the fabrication of inkjet printheads to space nozzles in a two-dimensional array rather than in a linear array" (column 2, lines 10-13). Hence, it would appear that one of

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ordinary skill in the art would not understand the nozzle arrangement depicted in Hawkins to be a linear array.


Upon return of this application to the examiner, the examiner should weigh the propriety of introducing a rejection of claim 2 under 35 U.S.C. § 103.

In conclusion, based on the foregoing, the examiner's rejection of claims 1 and 3-8 is affirmed, whereas the examiner's rejection of claim 2 is reversed. Accordingly, the examiner's decision rejecting the appealed claims is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED-IN-PART

  
EDWARD C. KIMLIN )  
Administrative Patent Judge )

  
TERRY J. OWENS )  
Administrative Patent Judge )

  
PETER F. KRATZ )  
Administrative Patent Judge )

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